

Amendments to the Specification:

Please delete the paragraph beginning at page 3, line 9:

~~Fig. 3 is table of adhesion test results.~~

Please replace the paragraph beginning at page 3, line 10, with the following amended paragraph:

Fig. ~~[[4]]~~ 3 is a plot of time versus peak irradiance.

Please delete the paragraph beginning at page 3, line 11:

~~Fig. 5 is a table of throughput rates as a function of peak irradiance and lamp diameter.~~

Please replace the paragraph beginning at page 31, line 24, with the following amended paragraph:

Rectangular prints of Sample X were jetted (at about 77°C) with a Galaxy 256/30 (Spectra Inc.) printhead on glossy, matte, and open stock paper, and cured at 470 fpm under a focused Fusion 300 system with a D-bulb. Cured samples were subjected to a variety of adhesion tests. The Fusion 300 irradiator was raised incrementally out of focus. At each focal height, prints on each type of paper were cured at 470 fpm and subjected to the same adhesion tests. Adhesion results are shown in ~~Fig. 3~~ Table 16.

Please replace the paragraph beginning at page 32, line 21, with the following amended paragraph:

Referring to ~~Fig. 3~~ Table 16, the finger nail scratch and double fold chip and crack results declined when the irradiator was 62 mm out of focus. Therefore, the data at 62 mm and 72 mm out of focus were not be included in developing a throughput prediction model. Irradiance profiles for all focal heights, including in focus, were obtained with an UV PowerMap.

Please replace the paragraph beginning at page 33, line 15, with the following amended paragraph:

A plot of exposure time in seconds required to pass adhesion testing versus total peak irradiance is shown in Fig. ~~[[4]]~~ 3.

Please replace the paragraph beginning at page 34, line 7, with the following amended paragraph:

Equation 10 was used to calculate throughput values for total peak irradiance readings between 900 mW/cm^2 and 15000 mW/cm^2 with 9 mm, 11 mm, and 22 mm UV lamps. Throughput data for Sample X using a medium pressure iron doped mercury lamp set in a half ellipse reflector are shown in ~~Fig. 5~~ Table 17, which shows throughput rates as a function of peak irradiance and lamp diameter.

Please replace the paragraph beginning at page 34, line 11, with the following amended paragraph:

Three throughput rates from ~~Fig. 5~~ Table 17 were evaluated to check the correlation of the model to actual cure data. The Fusion 450 system with a 9 mm ID D-bulb delivered 900 mW/cm^2 total peak intensity when operating at 35% power. The calculated throughput speed from ~~Fig. 5~~ Table 17 is 12 fpm. The American UV unit with a 22 mm ID metal halide lamp delivered 1800 mW/cm^2 at 200 Wpi input power and 3500 mW/cm^2 at 300 Wpi input power, resulting in calculated throughput rates of 90 fpm and 265 fpm, respectively.

Please add the following table (Table 16) before the paragraph starting at page 35, line 5:

Table 16

Focal Height(mm)	Paper Finish	Crock Test 11b/sq.in.	Eraser Test 11b/sq.in.	Eraser Test 11b/sq.in. plus 200g	Finger nail scratch	Double fold chip and crack	Double fold, weighted	Smear	Sutherland Rub Tester, 4lb weight
0	Dull	4	4	4	2	3	Pass	4	4
	Gloss	4	4	4	2	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4
10	Dull	4	4	4	2	3	Pass	4	4
	Gloss	4	4	4	2	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4
19	Dull	4	4	4	2	3	Pass	4	4
	Gloss	4	4	4	2	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4
26	Dull	4	4	4	2	3	Pass	4	4
	Gloss	4	4	4	2	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4
52	Dull	4	4	4	2	3	Pass	4	4
	Gloss	4	4	4	2	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4
62	Dull	4	4	4	1	2	Pass	4	4
	Gloss	4	4	4	1	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4
72	Dull	4	4	4	1	2	Pass	4	4
	Gloss	4	4	4	1	3	Pass	4	4
	Uncoated	4	4	4	4	4	Pass	4	4

Please add the following table (Table 17) after Table 16 (shown above):

Peak Irradiance	Lamp diameter: 9mm (0.36inches)			Lamp diameter: 11mm (0.43 inches)			Lamp diameter: 22mm (0.88 inches)		
	ips	fpm	m/s	ips	fpm	m/s	ips	fpm	m/s
900.00	2.4	12.2	0.06	2.9	14.6	0.07	6.0	29.8	0.15
1800.00	7.4	37.2	0.19	8.9	44.5	0.23	18.2	91.0	0.46
2000.00	8.8	44.1	0.22	10.5	52.7	0.27	21.6	107.8	0.55
2500.00	12.6	63.2	0.32	15.1	75.5	0.38	30.9	154.5	0.78
3000.00	17.0	84.8	0.43	20.3	101.3	0.51	41.4	207.2	1.05
3500.00	21.7	108.7	0.55	26.0	129.8	0.66	53.1	265.7	1.35
4000.00	27.0	134.8	0.68	32.2	161.0	0.82	65.9	329.4	1.67
4500.00	32.6	162.9	0.83	38.9	194.6	0.99	78.7	398.3	2.02
5000.00	38.6	193.1	0.98	46.1	230.6	1.17	94.4	472.0	2.40
5500.00	45.0	225.1	1.14	53.8	268.9	1.37	110.1	550.4	2.80
6000.00	51.8	259.0	1.32	61.9	309.4	1.57	126.6	633.2	3.22
6500.00	58.9	294.7	1.50	70.4	352.0	1.79	144.1	720.4	3.66
7000.00	66.4	332.1	1.69	79.3	398.6	2.02	162.3	811.7	4.12
7500.00	74.2	371.1	1.89	88.7	443.3	2.25	181.4	907.2	4.61
8000.00	82.4	411.8	2.09	98.4	491.9	2.50	201.3	1006.6	5.11
8500.00	90.8	454.1	2.31	108.5	542.3	2.76	222.0	1109.9	5.64
9000.00	99.6	497.9	2.53	118.9	594.7	3.02	243.4	1217.0	6.18
9500.00	108.6	543.2	2.76	129.8	648.8	3.30	265.6	1327.8	6.75
10000.00	118.0	590.0	3.00	140.9	704.7	3.58	288.4	1442.2	7.33
10500.00	127.6	638.2	3.24	152.5	762.3	3.87	312.0	1560.1	7.93
11000.00	137.6	687.9	3.50	164.3	821.7	4.18	336.3	1681.6	8.54
11500.00	147.8	739.0	3.76	176.5	882.7	4.49	361.3	1806.5	9.18
12000.00	158.3	791.5	4.02	189.1	945.4	4.80	386.9	1934.7	9.83
12500.00	169.1	845.3	4.30	201.9	1009.6	5.13	413.2	2068.2	10.50
13000.00	180.1	900.4	4.58	215.1	1075.5	5.46	440.2	2201.0	11.18
13500.00	191.4	956.9	4.86	228.6	1142.9	5.81	467.8	2339.1	11.89
14000.00	202.9	1014.6	5.16	242.4	1211.9	6.16	496.0	2480.2	12.60
14500.00	214.7	1073.7	5.46	256.5	1282.4	6.52	524.9	2624.5	13.34
15000.00	226.8	1134.0	5.76	270.89	1354.44	6.88	554.4	2771.9	14.08